

Characterising and Dating Puglian Oppida

by
Mike Seager Thomas



**Field-Walking at Arpi, Masseria Finizo,
Ordona and Tiati**

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Introduction

Between 2004 and 2008, the UCL Institute of Archaeology Tavoliere-Gargano Prehistory Project conducted extensive surface finds and phenomenological landscape surveys across the Puglian (Apulian) Iron Age *oppida* of Arpi, Masseria Finizio, Ortona and Tiatì (**Figure 1**). The aim was to characterise materially and phenomenologically, and to date, the settlement of these sites, which would then be interpreted in the context of the near contemporary *oppida* of Northern Europe, and the (in some cases) equally large sites of the Puglian Neolithic (Seager Thomas, 2020). These surveys focused on “randomly” selected survey stations, 69 at Arpi, 65 at Ortona and smaller numbers at the other two sites (**Appx 1**), two larger grids at Arpi and two extended transects at Tiatì. These stations, grids and transects were field-walked and the superficial material culture within them identified and quantified. We also conducted a series of person-centred sensory experiments within and across grid squares (e.g. **Appx 2**). The rationale behind, and the preliminary results of the person-centred sensory experiments were published in Hamilton *et al.*’s *Phenomenology in Practice* (2006), and a full account of some aspects of these surveys (which were conducted on a range of Puglian and other sites) in Hamilton and Whitehouse’s *Neolithic Spaces*, vol. I (2020). The results of the material culture surveys were long ago plotted and analysed, but have not yet been interpreted and written up for publication. This interim summary, collated >10 years after the end of the project, is intended to make available to interested researchers some of the data generated, and, should this data be written up without full acknowledgement of the input of the present writer,¹ establish his central role and long-term stake in the project as a whole. It is not interpretative and is not intended as a final word.

The principals in the Project were Sue Hamilton and Ruth Whitehouse (Project Co-directors) and the present writer, Mike Seager Thomas (Project Supervisor), of UCL Institute of Archaeology; Eleanor Betts of the Open

¹ A proposal to do just this was circulated by Dr Herring of NUIG on the 24th of May 2023

University; Edward Herring of NUIG (Project Deputy Director); and Keri Brown (also Project Deputy Director), then of the University of Manchester. Funding for the project in the field and afterwards came from the British Academy, UCL Institute of Archaeology, NIUG, and a Leverhulme Grant to Professor Whitehouse as a retiring academic. A not insignificant fraction of the funding came to the present writer.

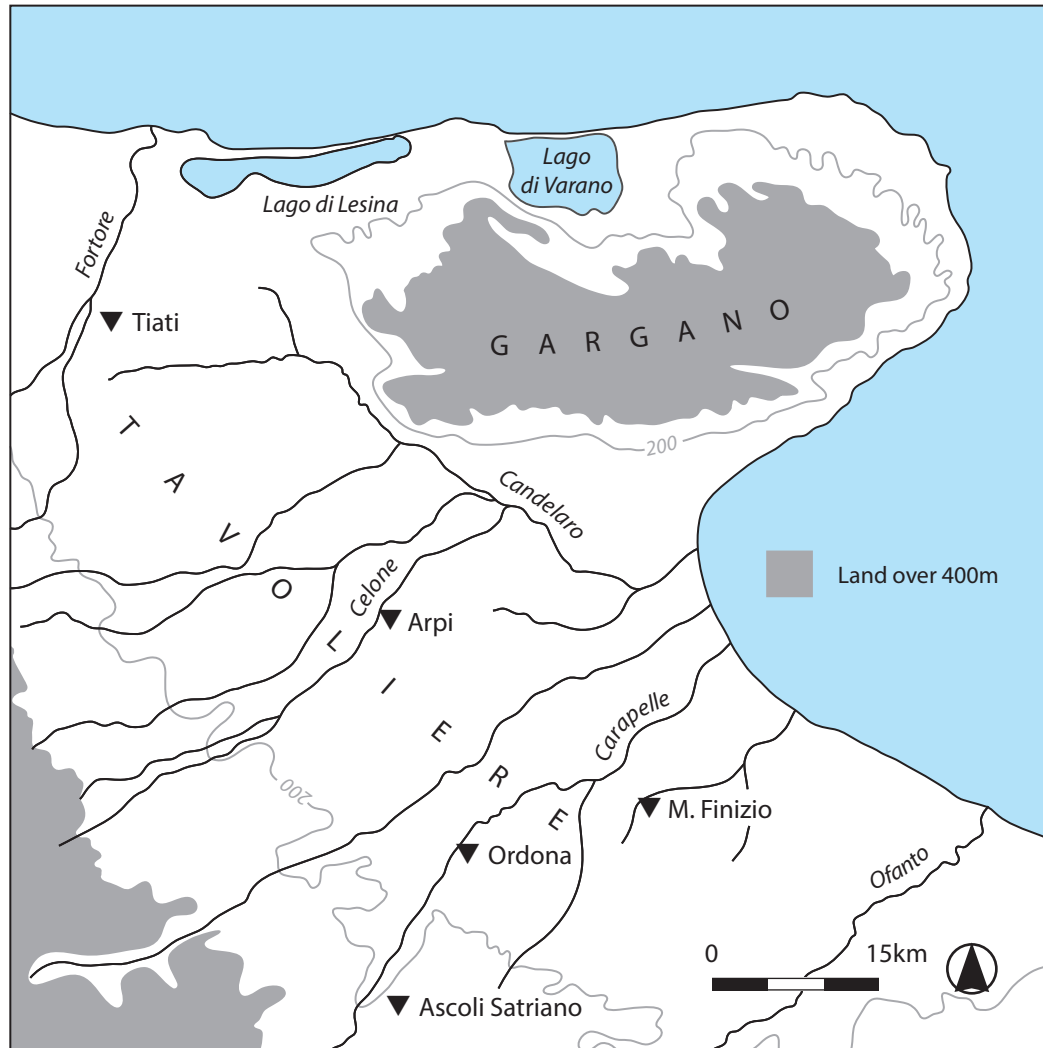


Figure 1

Northern Puglia showing the location of the surveyed *oppida* of Arpi, Masseria Finizio, Ortona and Tiati. Ascoli Satriano, also the site of an *oppidum*, was not surveyed

Methodology

Survey stations were located within the interiors of the sites, and around their boundaries, which at Arpi and Masseria Finizio are visible in aerial photographs and on the ground, and at Tiati are inferred from the ends of a network of possible, mostly long disused roads, which radiate out from it, and which are also visible in the aerial photographic record. (No boundary

as such has been identified at Ortona). Survey points were also selected beyond these boundaries in order to test the extent to which they were indeed “boundaries” but were mostly never visited.

Our method was as follows.

Stage 1 was to plot the crop-marks of the sites’ boundaries visible in aerial photographs (in the *John Bradford Archive of Aerial Photographs* and the Italian aerial photographic record) onto the relevant 1950s *Istituto Geografico Militare* 1:25000 maps of the region. The exact process involved and the reasons for this are described in the present author’s introduction to *Neolithic Spaces*, vol. 2 (Seager Thomas, 2020, pp. 8–10). For Tiati, we used a pre-existing plot, most probably made by the late John Bradford, as this showed more roads than are visible than the single aerial photograph we had of the site.

Stage 2 was to “select” the survey stations. While our intention was for the survey stations to cover the sites in their entirety, their actual locations were not “representative”, but conditioned by what is accessible on the ground today—and hence the description of them here as “random”.

The 1950s *Istituto Geografico Militare* 1:25000 maps use the Italian ED1950 grid and we used this system throughout the survey, locating the stations on the ground using a *Silva Multinavigator* GPS, which could accommodate a variety of different grid systems, including ED1950. The grid references given (Appx 1) are for the centre of the each station.

Stage 3 was to field-walk the survey stations (**Cover photo**). Survey stations were of two types: interior and rampart or boundary. Interior stations comprised a circle with a diameter of c. 100m. Rampart or boundary stations comprised a transect at right angles to the boundary extending 50m either side of it and c. 30m wide. Within these, all surface material culture (loom-weights, metal, pottery, artefactual and non-local stone, etc.) was collected, identified, dated and quantified. This was done on site (**Figure 2**) and the collected material then re-scattered on site.

The large gridded surveys at Arpi were located at Survey Stations 14 and 17. The survey strategy applied to these was identical to that applied to the other survey stations, except that it was applied on a much larger scale. Surface material culture was collected, logged and discarded within each grid square. Detailed records of these latter surveys are not currently available to the writer, and they are distinguished here only to highlight a possible skew introduced into the present record by the disproportionately large areas surveyed, and the disproportionately large number of finds made in them. In any final report this skew will be easily fixed by treating each square within them as a separate survey station.



Figure 2

Recording finds at Tiati

Iron Age pottery and other early material culture

For the surveys of Arpi, Masseria Finizio, Ortona and Tiati surface material culture was recorded and quantified on our recording sheets (**Appx 3**) under the following groups: “Iron Age Pottery,” “Other Pottery and Ceramics”, and “Other Finds”. Non-specified “Details and Comments”—which implicitly, rather than explicitly (a mistake), included things like finds visibility and survey conditions—were also invited.

Iron Age pottery (**Figures 3 and 4**) was divided into “*Impasto* undecorated” and “*Impasto* decorated” (hand-made, usually tempered wares), “Geometric Monochrome”, “Geometric Bichrome”, “Wheel-made Painted” and “*Figulina*” (buff or yellow levigated wares), “Black Glaze” (which was often quite red), “Black Figure”, “Red figure” and “Grey Glaze” (basically slipped and figure painted red and very occasionally yellow terracottas), and “Hellenistic Cooking Pot” (a hard, wheel-thrown tempered ware). “Over-painted” slipped wares such as Gnathian pottery, which was not initially distinguished but proved common, was added as a separate category later.

Other Pottery and Ceramics was divided into “Neolithic”, “Bronze Age”, “Roman” and “Tile” (CBM), and Other Finds into “Iron,” “Bronze”, “Stone”, “Loom-weights”, “Architectural Elements” and “Other”.



Figure 3

Arpi loom-weights, *impasto*, red figure, probably wheel-made painted and Hellenistic cooking pot. Scale 10cm



Figure 4

Tiati loom-weights (1), matt-painted geometric monochrome (2) and bichrome pottery (3), black-glazed pottery (4), *impasto* (5), red slipped ware (6) and CBM (7). Scale 10cm

Arpi

Arpi is D-shaped with a long axis of approximately 5km (Bradford, 1957, p. 198). Lying invisibly amongst the endless cereal fields and vineyards of the Tavoliere Plain, it is huge, a truly impressive site (Figure 5). Much of the interior is flat and level (Figure 6), and local visibility foreshortened so that is difficult to orientate oneself within it. A water tower, a distant vineyard, and, when it is ploughed, the weeds demarcating a road, acquire



Figure 5

Arpi (arrowed) and Foggia in 1943. Photo: *The Bradford Archive*

an immense visual significance, as do obscuring trees and buildings, and the Apennines and Gargano, enclosing it to the southwest and the northeast.

For the rampart, our principal source is a much reproduced Italian air photo first published by John Bradford (1957, pl. VIII). This must date from the late spring/early summer as the crops visible in it—mostly cereals—



Figure 6

Arpi interior, looking across the site towards the Apennines from Survey Station A52



Figure 7

Arpi's northwestern rampart, looking towards the Torrente Celone. Fortuitous section just to the northeast of Survey Station A14

are not fully ripened. In it, the D-shaped rampart shows up clearly as a white line against the dark fields, from which radiate faint traces of at least nine roads. In the interior of the D a highly complicated network of roads and other features shows up darkly against the paler fields, including the continuation of the crop-marks of the roads visible outside the site.

In addition there are 20-odd photos of the site in the *Bradford Archive of Aerial Photographs*. Most interesting of these is a high level photograph from the end of July 1943, unfortunately rather bleached out, in which Arpi and nearby Foggia are shown side by side (**Figure 5**), the WW2 town with its factories and railway station covering a much smaller area than that enclosed by the Iron Age rampart.

Also of some interest are several partial photos of the site from September 1943. Captured after the harvest, the white line of the rampart is self-evidently not a crop-mark, but a soil-mark. We saw this on the ground in four places, where it proved to be calcareous and/or stony (cf. Bradford, 1957, p. 168) (**Figure 7**). In two of these it was the only thing remaining that showed there had been a rampart (adjacent to Survey Stations A54 and A68), while at the third (adjacent to Survey Station A65), it did not comprise but was to the rear of a heavily ploughed but still upstanding stony rampart. We (the present writer) believe therefore that it is what remains of the *crosta* subsoil previously protected by the rampart (cf. Drewett, 1977, p. 205).

Running between a series of irregularly spaced nodal points, the rampart now rarely stands higher than a metre or so (**Figure 8**), but its breadth, which in places exceeds 15 metres (cf. Bradford, 1957, p. 167), suggests something much higher, and it is no exaggeration to suggest that it must formerly have comprised many thousands of tons of rock and soil. Today the rampart often remains a striking feature in the landscape, lying across a flat empty field or running at the side of the Foggia–San Marco road. Indeed often during the survey it was its appearance in front of us, as much as our GPS navigation, that would show us we had reached our destination.

In constructing it, its builders made use of what topography there was. To the northwest, it follows the edge of the Torrente Celone's upper terrace (**Figure 7**), which itself forms a huge bulwark across the Plain. Striking southeast from its northernmost point, it runs behind a shallow ditch-like valley, whilst at our Survey Station A6, on the Foggia–San Marco road, the ground behind it drops away abruptly. From the outside and the inside, respectively, these features would have greatly enhanced the rampart's appearance. What is more, the rampart is itself topographic in scale and would in the past have been a major landscape feature in its own right.



Figure 8

Arpi Survey Station A5, looking across the still upstanding rampart from the outside. Only the heads and upper shoulders of the people standing inside are visible

In summary, the results of our field-walked surveys within the site are as follows (**Appx I; Figures 9–11**):

- Sparse Neolithic pottery was identified at one location (Survey Station A63). No (?) BA pottery was identified
- Very few locations yielded no IA finds at all (Survey Stations A31, A42 and A69)
- Finds density is greatest in areas of topography, irrespective of form (dip, slope, eminence etc), indicating a possible preference for these locations over flat land
- There is a marked increase in pottery density through time
- Only 3 stations yielded earlier IA pottery only (Survey Stations A6, A15 and A20) and one of these (Survey Station A20) yielded a (LIA) loom-weight
- The identification of large quantities of LIA pottery in several areas where earlier IA pottery is rare, show early activity to have been genuinely sparse. If extant in the earlier IA, the rampart must have enclosed vast empty areas
- Loom-weights = later LIA
- The distribution of loom-weights was more focused than that of later IA pottery, notably avoiding the eastern perimeter of the site

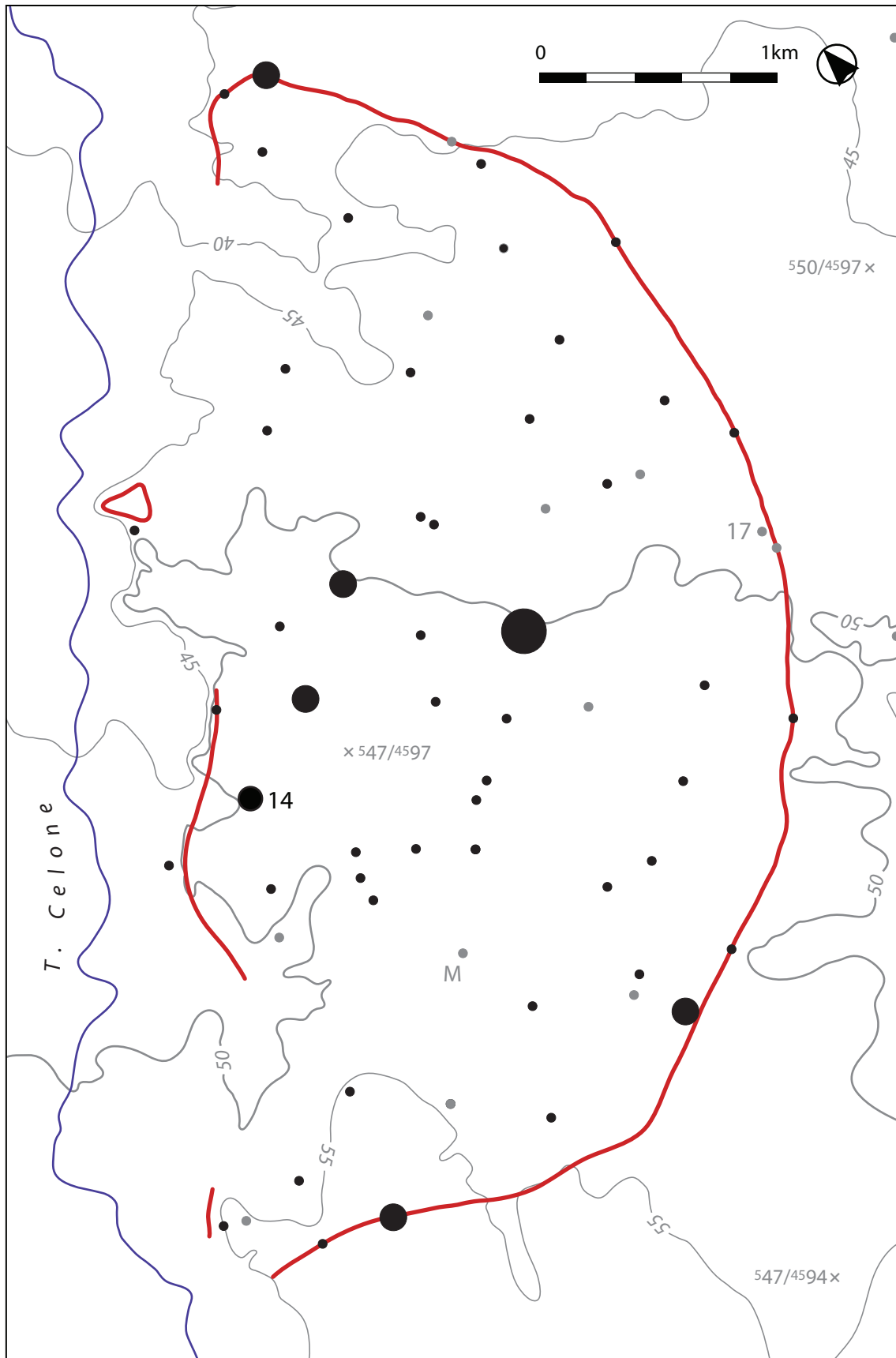


Figure 9

Earlier IA pottery at Arpi. Grey dot: none; small black dot: sparse; medium black dot: moderate; large black dot: abundant. M= Medusa Tomb

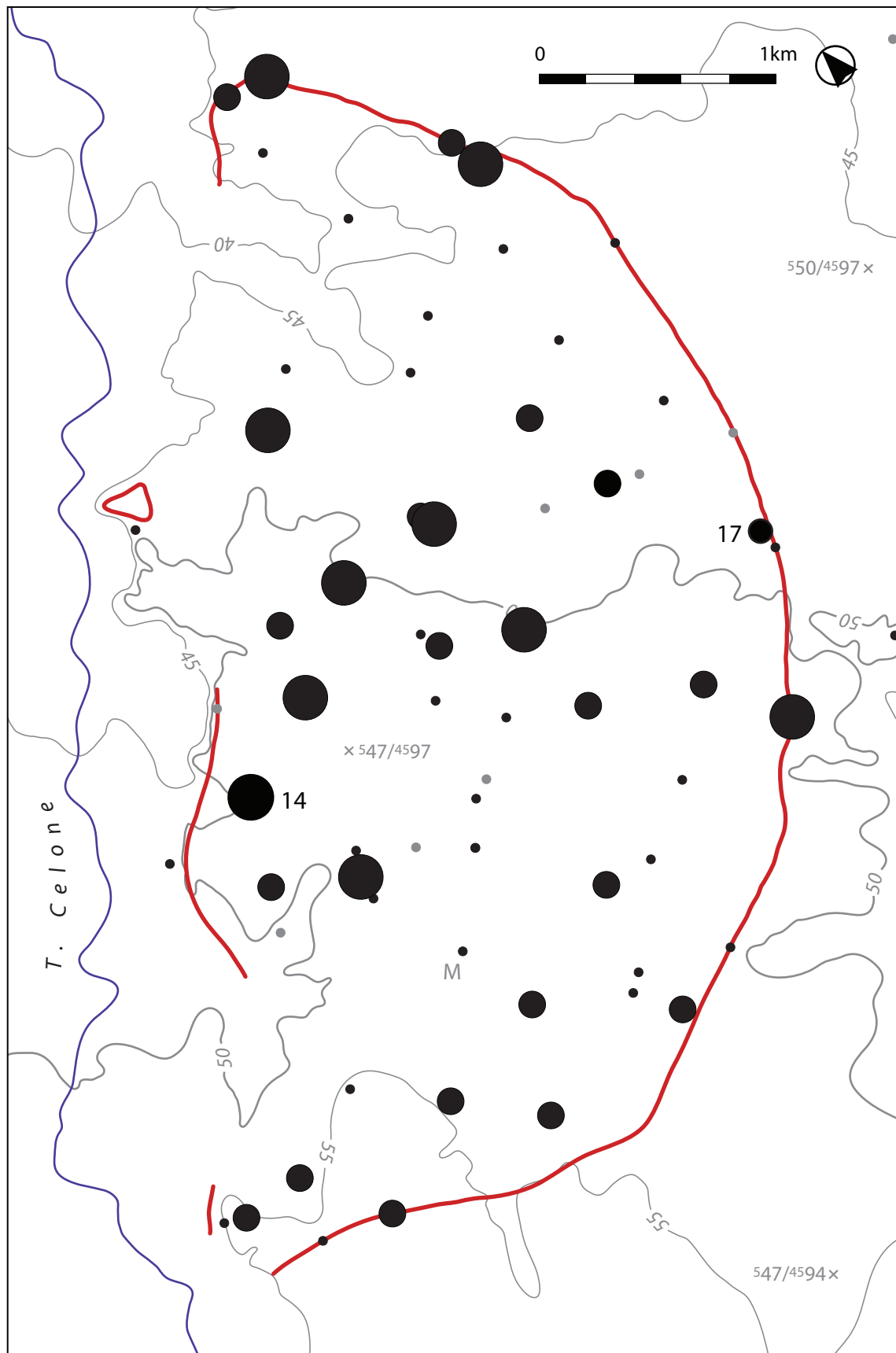


Figure 10

Later IA pottery at Arpi. Grey dot: none; small black dot: sparse; medium black dot: moderate; large black dot: abundant. M= Medusa Tomb

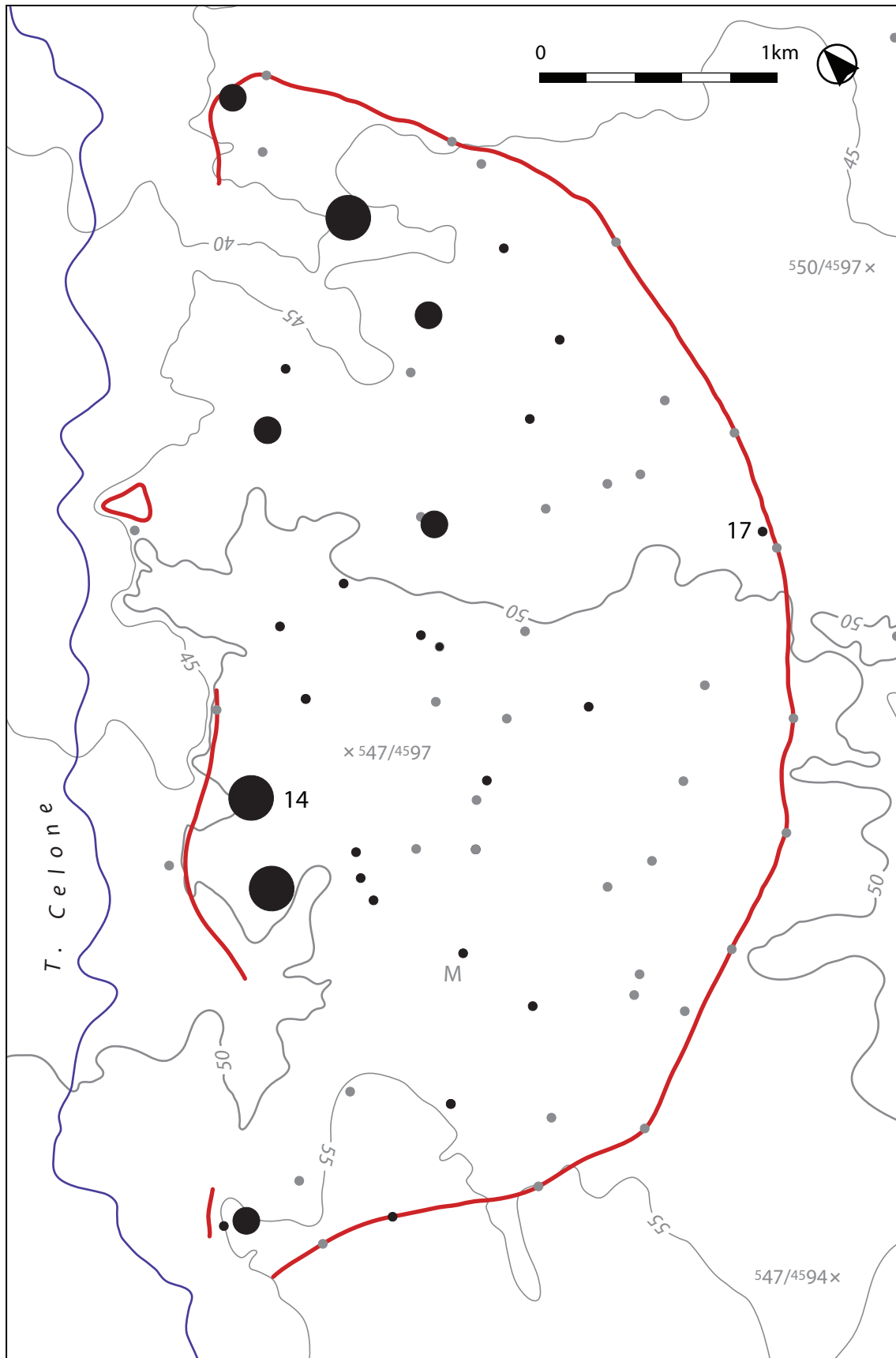


Figure 11

Loom-weights at Arpi. Small grey dot: none; small black dot: sparse; medium black dot: moderate; large black dot: abundant. M= Medusa Tomb

Individually notable finds from Arpi included a loom-weight with vegetal impressions (an opportunistic find) (Figure 12.1), two fragments of Daunian stele (from Arpi Survey Stations A? and A63) (Figure 12.2; Appx 4), an unbroken black glaze *saliera* (from Survey Station A14) (Figure 12.3) and a cuboid stone “rubber” of similar to and in the same non-local volcanic stone as that from Ordona referred to below (p. 16) (Figure 12.4).



Figure 12

Notable finds from Arpi. Scales 10 and 5cms

Masseria Finizio

Masseria Finizio is oval and much, much smaller, with a long axis of just under 1km. As at Arpi, it lies invisibly amongst the endless cereal fields and vineyards of the Plain, while its flat interior foreshortens local visibility and, where vines have been planted, often obscures it altogether (Figure 13). Its boundary consists of a pair of ditches which cut off a bend in the Marana di Castello, a



Figure 13

The flat interior of Masseria Finizio

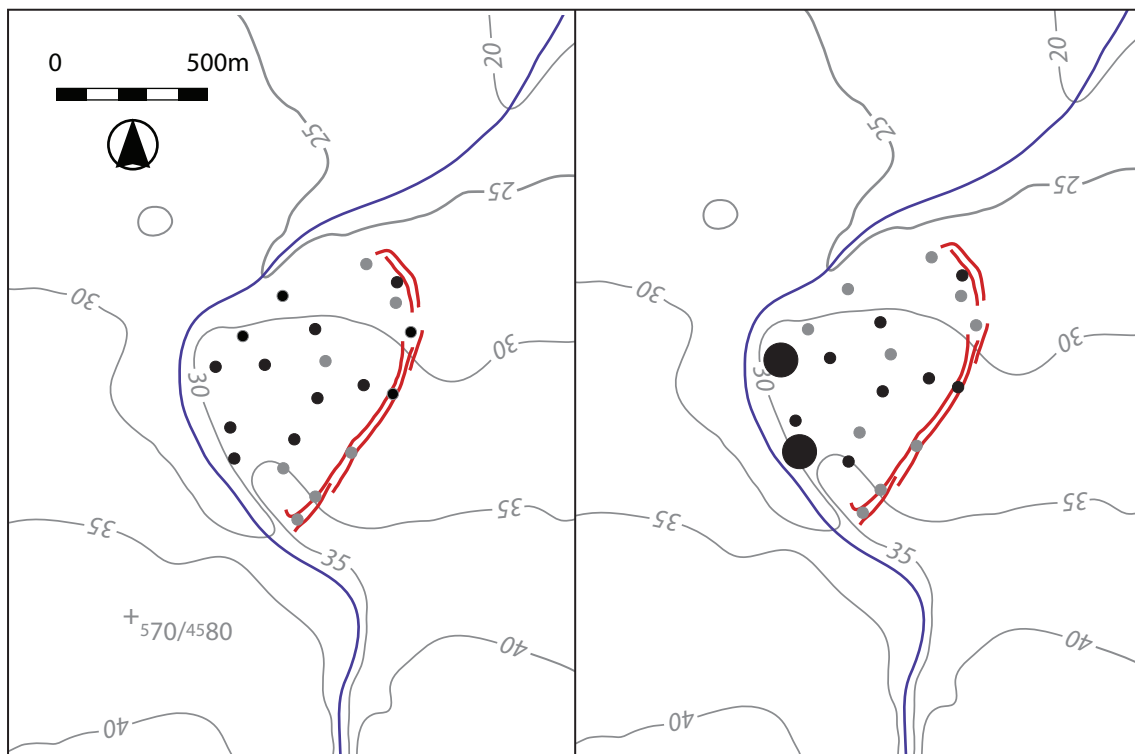


Figure 14

Earlier (left) and later Iron Age pottery (right) from Masseria Finizio. Grey dot: none; small black dot: sparse; medium black dot: moderate

small but deeply cut stream with a pronounced terrace, which severely restricts access to the site on the ground. These are visible as crop marks in the field and very clearly in aerial several photos of the site in the *Bradford Archive of Aerial Photographs* (Figures I4 and I5). No traces of a rampart are identifiable.



Figure 15

Masseria Finizio in 1943. Photo: *The Bradford Archive*

In summary, the results of our field-walked surveys within the site are as follows (Appx I; Figure I4):

- Masseria Finizio yielded less pottery overall than the other IA sites surveyed
- *Impasto* was absent from the south of the site
- Earlier IA pottery was sparse overall
- Apart from *impasto*, the distributions of earlier IA and later IA pottery across across the site was similar
- There were two moderately dense concentrations of LIA pottery (at Survey Stations F9 and F18)
- Both moderately dense concentrations of Iron Age pottery were located on the edge of the river terrace
- Pottery deposition more or less ends with the IA
- The site yielded no loom-weights at all

Masseria Finizio yielded no individually notable finds.

Ordona

Ordona, another very large Iron Age site, differs from Arpi and Masseria Finizio in that it is demarcated on one side by a highly visible natural boundary, the c. 25m high escarpment terrace escarpment of the Torrente Carapelle, and on the other side is—at least today—open to the wider landscape. Owing to often sloping topography, visibility within the site is often good (**Figures 16**). A rampart-like feature demarcating the inner edge of the excavated masonry ruins of Roman *Herdonia* (see Mertens, 1967), which lie immediately behind the escarpment, lies well within the Iron Age site as revealed by the distribution of Iron Age material culture.

In summary, the results of our field-walked surveys at Ordona are as follows (**Appx 1; Figures 19–21**):

- As at Arpi, very few of the locations survey yielded *no* IA finds
- No perimeter is clearly defined by the finds distribution, although IA occupation *thins* to the west
- The limits of our sureveyed pottery distribution—which falls inside our wider survey area—more or less corresponds with the area of occupation identified by J. Mertens (**Appx 5**)
- Early pottery using activity was much denser than at Arpi
- Earlier and later IA pottery distributions are similar
- There are later IA outliers
- No special preference was shown for for “topography” over flat land during the IA (unlike at Arpi, and Ordona during the later Roman occupation)
- Loom-weights = later IA
- Loom-weights were concentrated to the south of the site
- There were proportionately fewer loom-weights than at Arpi or Tiati

Individually notable finds from Ordona included a rare rim sherd painted in the Ascoli-Vegetal style (**Appx 4**), a brooch-impressed loom-weight (from Survey Sation O32) (**Appx 4**), a saddle quern in non-local vesicular lava (**Figure 18**), and a cuboid stone “rubber”, more distorted than but similar to, and in the same stone as that from Arpi referred to above (p. 13).

Tiati

Tiati, too, is located at the on top of an escarpment above a river—the Fiume Fortore. Its interior topography, however, is deeply incised and its visual character, utterly different from that of the other IA sites surveyed. The site, as demarcated by the aforementioned road ends (**Figures 22 and 23**), is once again approximately D-shaped but encompasses a discrete hill (Coppa Mengoni), the slope of another hill and the valley between them



Figure 16

Looking east across Ordonia Survey Station O11, from the interior “rampart”



Figure 17

Roughly sorted pottery from Ordonia Survey Station O12, on the interior “rampart”



Figure 18

Lower saddle quern of highly vesicular non-local lava from Ordona. Scale 10cm

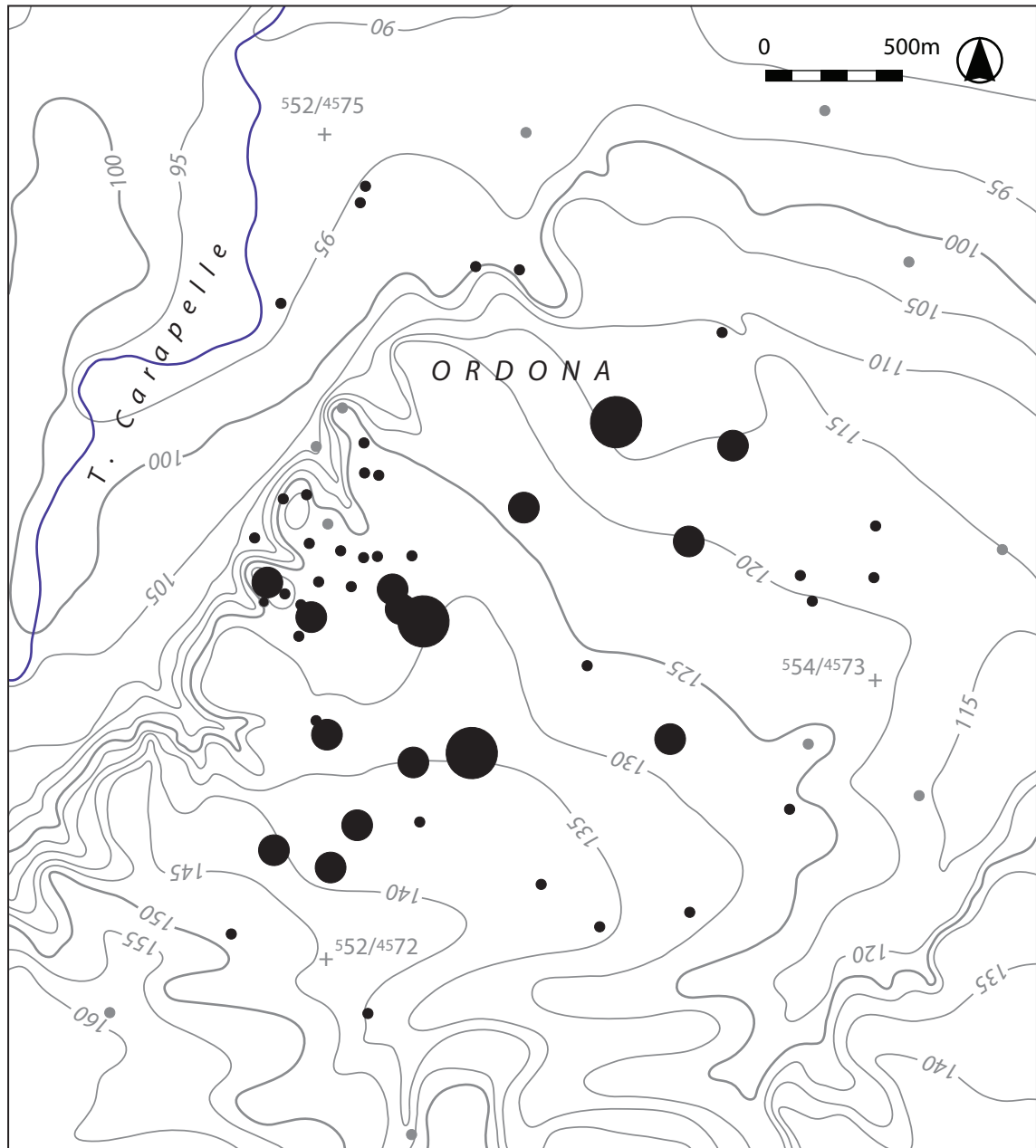


Figure 19

Earlier Iron Age pottery from Ortona. Grey dot: none; small black dot: sparse; medium black dot: moderate; large black dot: abundant

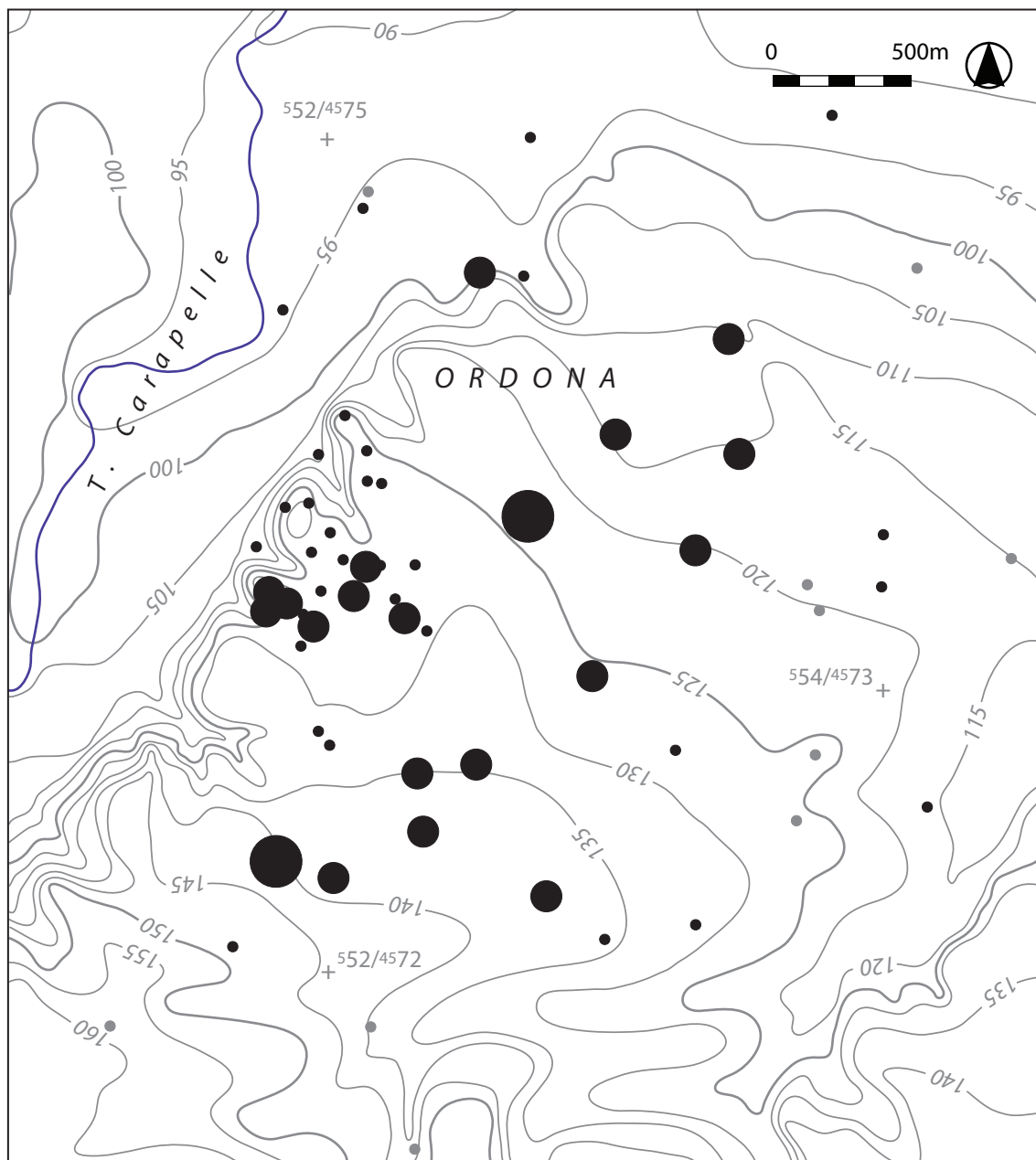


Figure 20

Later Iron Age pottery from Ordonna. Grey dot: none; small black dot: sparse; medium black dot: moderate; large black dot: abundant

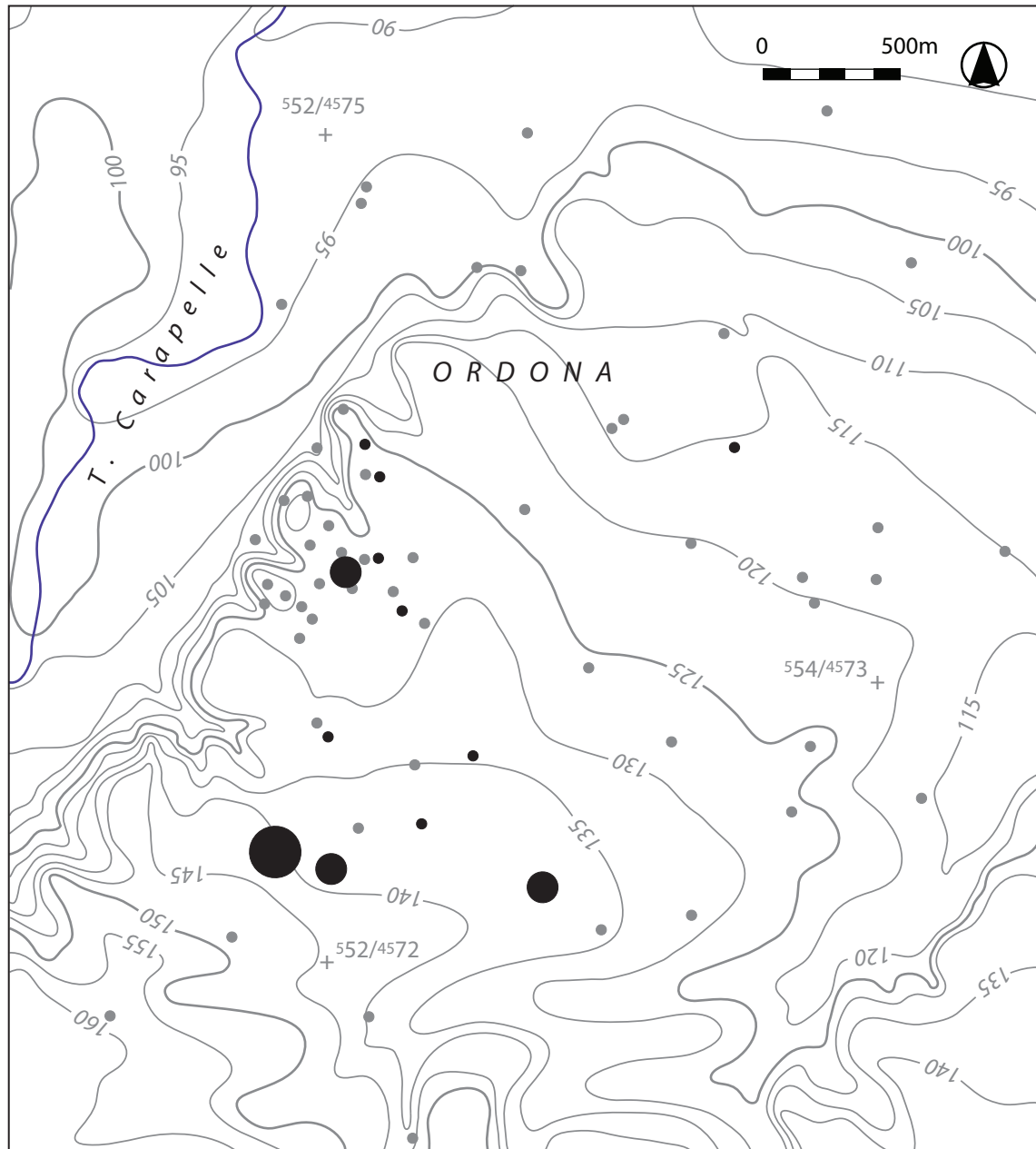


Figure 21

Loom-weights Iron Age pottery from Ortona. Grey dot: none; small black dot: sparse; medium black dot: moderate; large black dot: abundant

(the Piani di Lauria) (Figures 24 and 25). The possibility of a former rampart is suggested by a pale, serpentine crop-mark visible in aerial photographs, which runs northeast across the site from Coppa Mengoni before turning northwest into the Piani di Lauria in the form of a pronounced lynchet. For the greater part of its length, however, this feature corresponds with a topographical hollow created by a former water course (Figure 22).

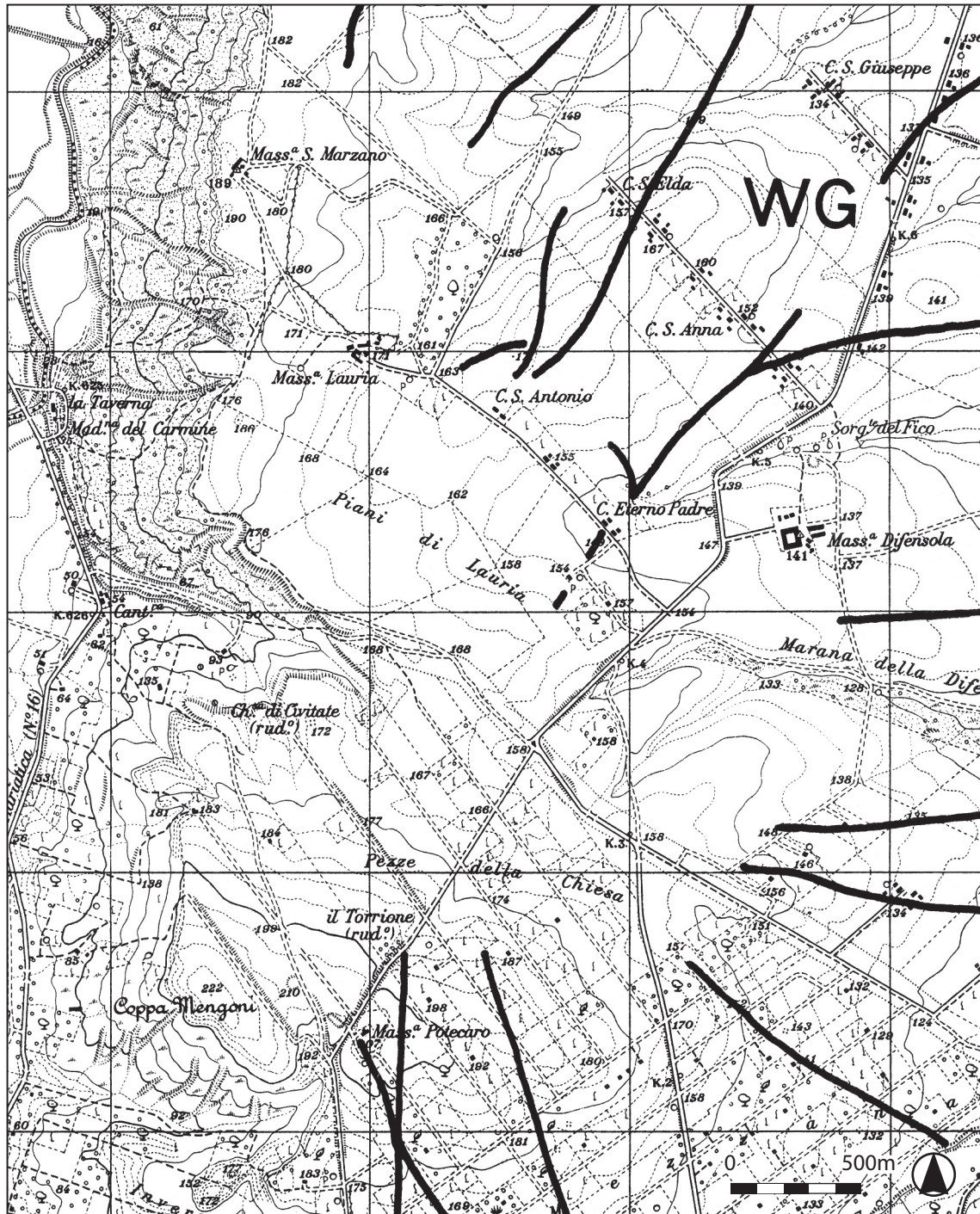


Figure 22

John Bradford's IGM map of Tiati on which are plotted a series of roads (in black), which perhaps indicate the extent of the site



Figure 23

Tiatì in 1951. *Photo: Stato Maggiore Aeronautica Militare*

In summary, the results of our field-walked surveys at Tiatì are as follows: (Appx I; Figures 26–29)

- Owing to the (superficial) similarity between Puglian *impastos* of Bronze and earlier Iron Age date, and our practice of recording and discarding finds in the field, we were obliged to bulk these by generic type rather than by dateable typological group. This means that our records of earlier pottery for Tiatì are not



Figure 24

View northeast from Coppa Mengoni, Tiati



Figure 25

The Piani di Lauria, Tiati, with the Gargano behind. The figures to the left of the near pylon are on one of the survey transects

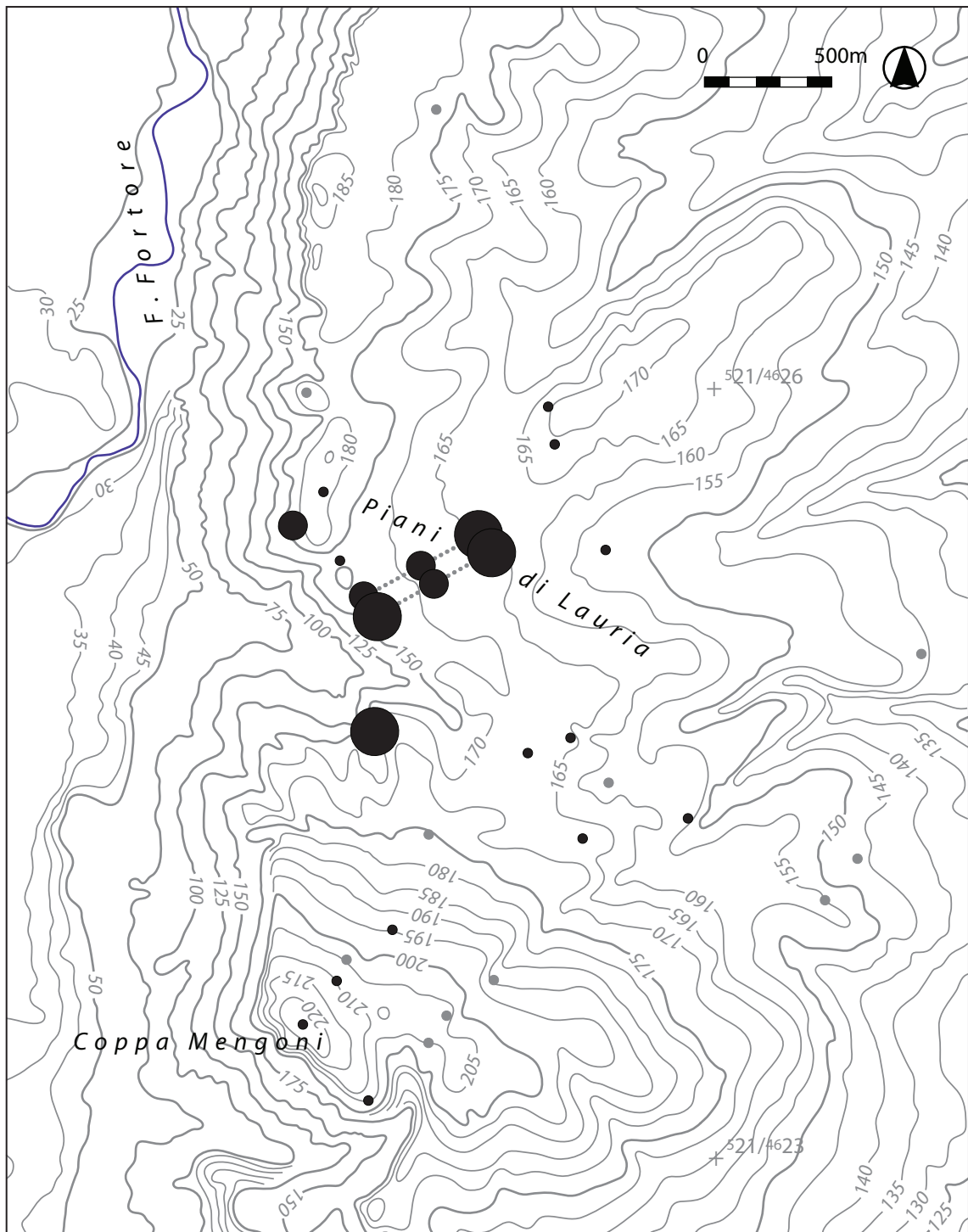


Figure 26

Impasto from Tiati. Grey dot: none; small black dot: sparse; medium black dot: moderate; large black dot: abundant

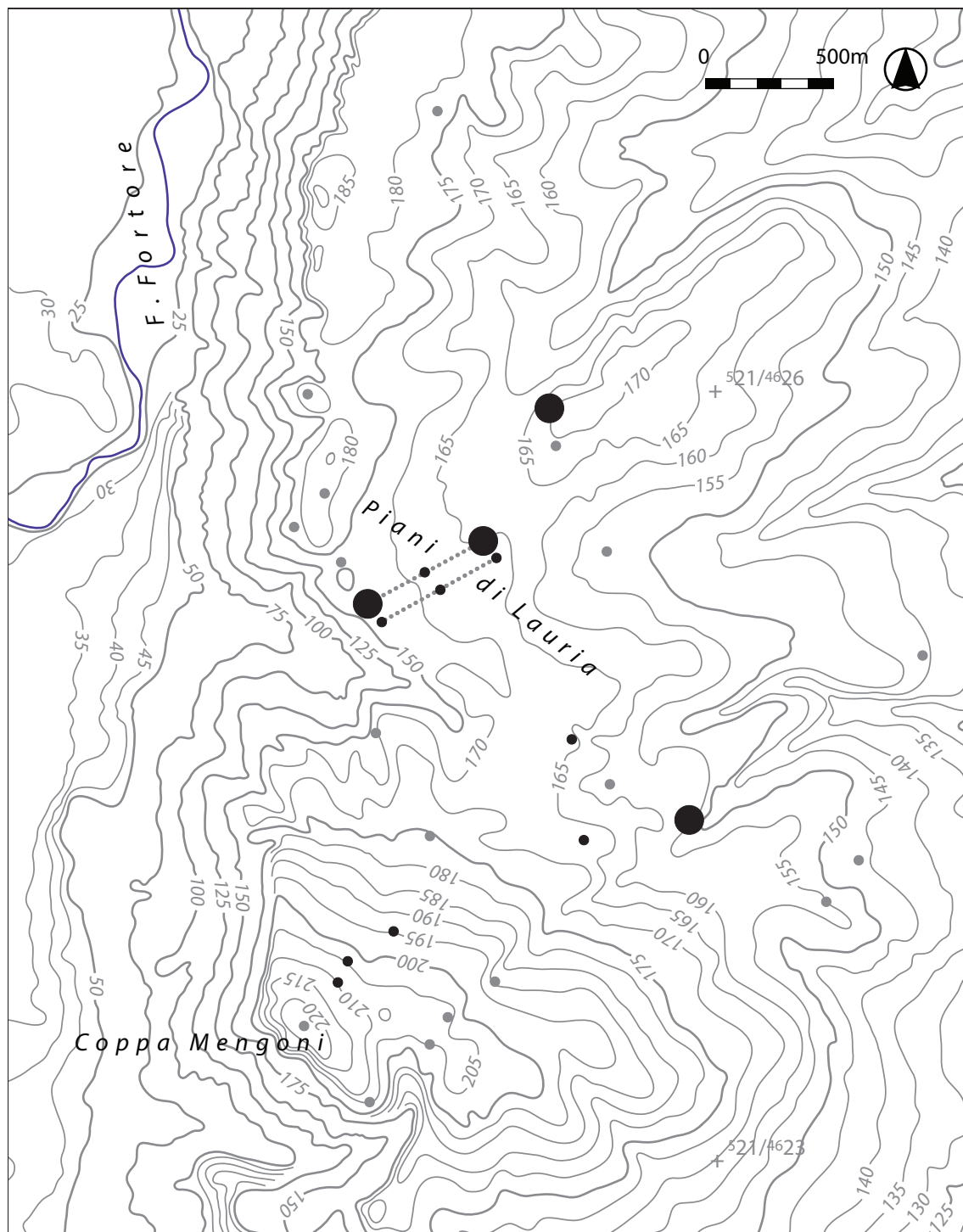


Figure 27

Earlier IA pottery from Tiati, *excluding impasto*. Grey dot: none; small black dot: sparse; medium black dot: moderate

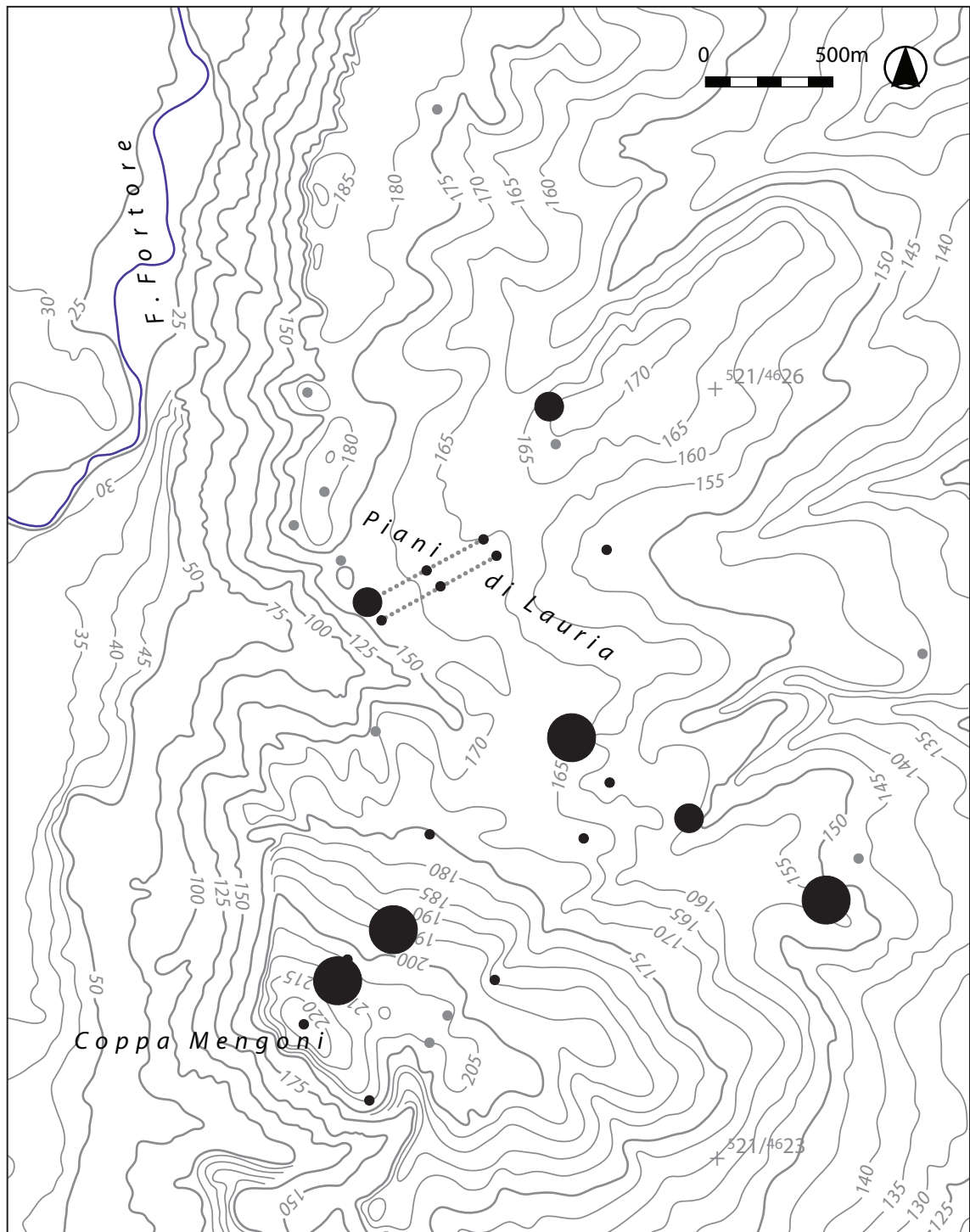


Figure 28

Later IA pottery from Tiati. Grey dot: none; small black dot: sparse; medium black dot: moderate; large black dot: abundant

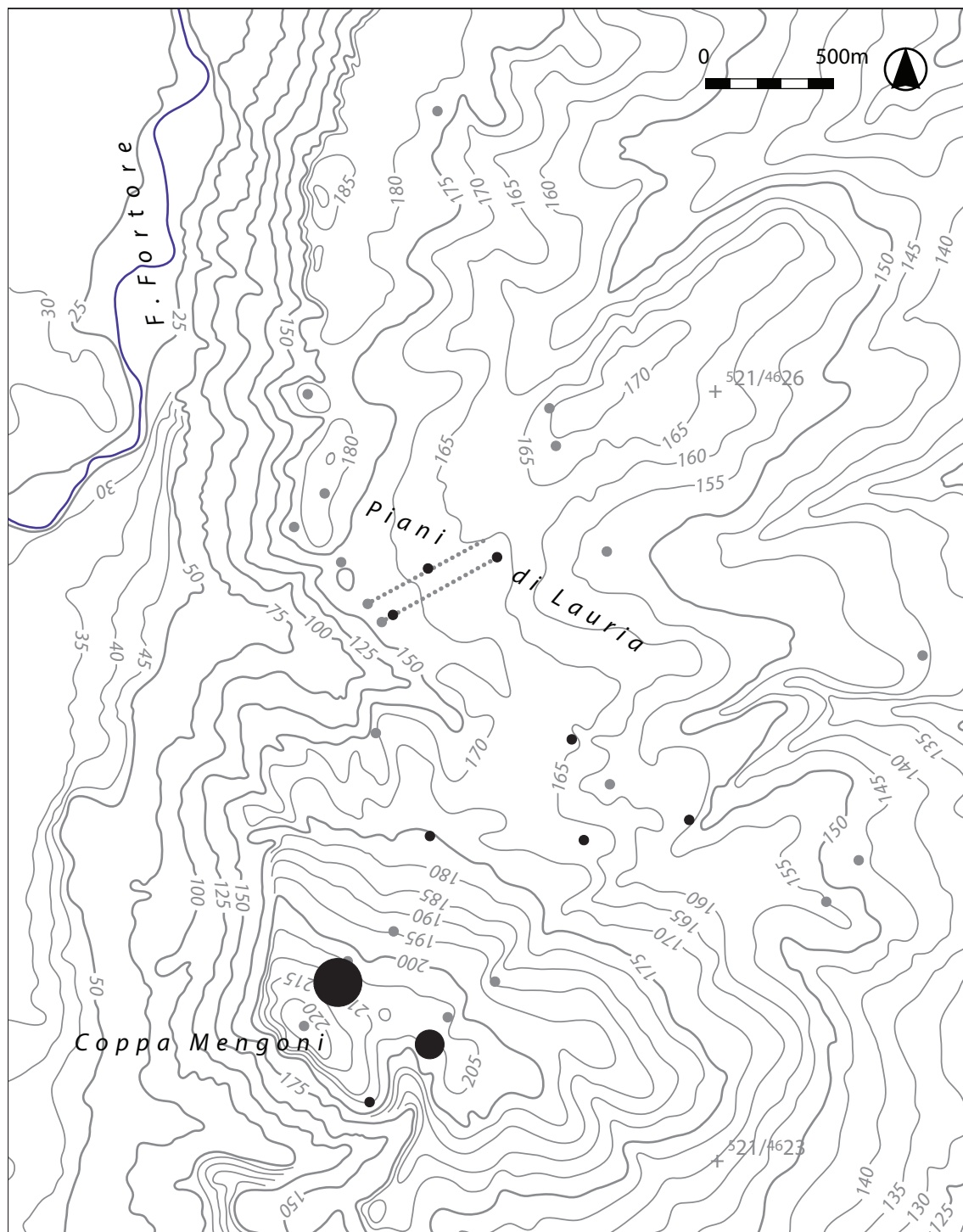


Figure 28

Loom-weights from Tiati. Grey dot: none; small black dot: sparse; medium black dot: moderate; large black dot: abundant

- comparable with our records of it for the other sites surveyed
- Early and later pottery occurs across the site but the principal foci of *impasto* and pottery of unambiguous earlier IA date, and later IA pottery (including loom-weights), are quite in different locations, with the earlier material focused on the Piani di Lauria and the later to the south of this
- A significant concentration of later IA pottery (at Survey Station T15) was recorded *outside* the area of the site demarcated by the possible rampart
- Loom-weights = later IA
- There were proportionately more loom-weights at Tiati than at Ortona (the two sites in the north, Arpi and Tiati, have proportionately more than the two in the south, Masseria Finizio and Ortona)
- Once again the distribution of loom-weights was more focused than that of later IA *pottery* from the site
- Though finds visibility was poor, overall Tiati seemed to be the richest artefactually of the four sites visited

Figure 29

One of eight loom-weights found at Survey Station T2



Notable individual and groups of finds included a loomweight (**Figure 29**) with a possible chatelein impression (**Figure 29**), a large assemblage of probable later Bronze Age *impasto* (**Figure 30**) and a horned ceramic pestle (also from Survey Station T2).



Figure 30

Tiati *impasto* from Survey Area T1 and the transects. T1 and T10 are perhaps Iron Age. The remainder are Bronze Age. Scales 5cm and 1€

Issues with survey the data relevant to its final interpretation

It is our view that these surveys were a worthwhile exercise and that their results will contribute, albeit in a limited way, to our knowledge and understanding of the Iron Age in the region. That said, the data recovered—like that from all surface surveys—needs to be treated with caution.

The first thing to note is that the surveys were conducted at different times under sometimes very different ground conditions. Most (but not all) survey stations at Arpi, for example, had been thoroughly ploughed and finds visibility was good, while most (but not all) of those at Tiati were under cereal stubble, and finds visibility relatively poor, so that whereas comparisons made *within* Arpi are mostly viable, comparisons made *across* the two sites may not be. Ground cover and finds visibility at Masseria Finizio and Ortona was more variable, so that even comparisons within these may not be viable.

There may also be issues with our pottery identifications. Owing to the conditions under which we had to work, it was not always possible to clean the sherds as thoroughly as would have been wished. In addition, owing to the pedological environment of the Plain, material culture finds of all categories become heavily calcreted and typologically, technologically and chronologically diagnostic characteristics—such as surface decoration and fabric—obscured. It is likely therefore that individual sherds were misidentified.

Also potentially problematical is the current bulking and chronological attribution of some regional pottery types—in particular *impasto* (handmade from unlevigated and/or tempered clays), which in Puglia straddled the later Bronze and the Early and Middle Iron Ages, and plane yellow *figulina* (made from pure or levigated clays), which straddled the Middle and Late Iron Ages, the Roman period and on our sites may even include Neolithic material. At Tiati, for example, which of our *impasto* body sherds (**Figure 30**) were later Bronze Age and which Iron Age? Both have previously been identified there (Gravina, 1994) but because they were dirty and we were poorly trained in the Bronze Age fabrics of the region, the exact attribution of many remain uncertain. And how much of our *figulina* came from the undecorated or abraded parts of Middle Iron Age Geometric Monochrome or Bichrome pots? For surveys like ours to fully realise their potential, much more work on Italian prehistoric and early classical pottery fabrics will be necessary.

Most problematic of all, however, is the issue of context. We do not know from what sort or sorts of contexts the material culture recovered derived—primary use deposits, secondary rubbish deposits, graves? This greatly limits its interpretative potential. We do know the recent agricultural history of the stations surveyed. Have they been deep-ploughed, and material from depth brought to the surface? The weekend before we began surveying at Arpi, a pipe trench was dug through Survey Station 14 and filled in again, littering the surface of the station with pottery—including an unbroken “*saliera*”—from below the plough soil (**Figure 12.3**). Has soil been introduced to, or removed from the site? Finally, because out of context, unless a surface survey yields a good-sized assemblage of material *attributable to one date only*, anything collected, which is itself intrinsically undateable, or is dateable to a wide range of dates—such as CBM and most broken quern stone—will be interpretatively worthless. For this reason, plots of these latter material culture types have been omitted from the present report.

Finally there is the issue of controls referred to in the introduction. We did not survey immediately outside Arpi or Masseria Finizio and we do not know whether the distributions observed inside them continued outside. This error, however, is easily rectified.

Conclusion

The success of any archaeological field-walking survey and its relative usefulness interpretatively will be contingent upon the appropriateness of the survey design to the tasks it sets itself, the extent to which these tasks are original and useful archaeologically, and the extent to which they are possible in the field.

The survey designs for all four of these sites were the same and finds visibility at three of them (Arpi, Masseria Finizio and Ordona) good enough for us to carry them out successfully. We should of course have surveyed beyond the known boundaries of Arpi and Masseria Finizio, and the previously suggested extent of Ordona, but otherwise, the database produced for them was good and does help characterise materially and date the settlement of these sites, something which at Arpi and Masseria Finizio had not been done systematically before.

The Tiati survey, however, was less successful. In part this was due to the ground conditions, which made it difficult for us to survey how and where we wanted, in part because the site had been surveyed before, and for our work to be useful, it had to be a lot better than it in fact was. It reminded of the huge potential of the site but as it stands, it is basically an unfinished survey, no better than what went before and itself not fit for further publication.

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Appendix I: Survey locations

Arpi

Station	Type of survey	Overall finds density	Ceramic finds				Topography	Grid reference (ED1950)
			Imp.	MIA	LIA	Loom-weights		
A1	interior	A	?	S	M	>1	eminence	54758/459706
A2	boundary	S	undifferentiated IA				level ground	54636/459513
A3	boundary	S	undifferentiated IA				level ground	54684/459501
A4	boundary	S	undifferentiated IA				level ground	54810/459550
A5	boundary	A	S		A		level ground	54846/459582
A6	boundary	S	S	S			level ground above low undulation	54911/459687
A7	boundary	S	S	S	S		level ground	54928/459779
A8	boundary	A	M	S	M		level ground at edge of low terrace	54842/459930
A9	boundary	S			S		level ground	54896/459653
A10	boundary	S	S		S		level ground	54550/459558
A11	boundary	M			M		level ground at edge of low terrace	54909/459854
A12	boundary	A	M	S	M	1	level ground	54579/459546
A13	boundary	M		S	S		high undulation	54759/459529
A14	gtid	A	M	M	A	?	level ground	54657/459620 (SW corner)
A15	boundary	S	S	S			slope of river terrace	54665/459750
A16	boundary	M	M	S	S		slope of river terrace	54690/459812
A17	grid	S	S	S	S	1	level ground	54897/459650 (SE corner)
A18	interior	M			M	>1	slope	54534/459586
A19	boundary	M	S		S	1	slope	54525/459590
A20	opportunistic	S	S			2	level ground	54734/459651
A21	interior	S					level ground	54869/459702
A22	interior	M	S	S	S		level ground	54898/459717
A23	interior	A	S	S	S		top of ridge	54828/459798
A24	interior	S			S	>1	level ground	54850/459811
A25	interior	M	S		S		level ground	54726/459649
A26	interior	M	S	S	S		level ground	54711/459635
A27	interior	A	S	S	S	7	slope	54852/459863
A28	interior	M	S	S	S	1	level ground	54892/459809
A29	interior	A	S		M	2	level ground	54851/459750
A30	interior	S	S	S	S	2	level ground	54883/459764
A31	interior	N					valley	54627/459664
A32	interior	A	N/A	N/A	N/A		eminence	54735/459676
A33	interior	M	S	S	M		slope of eminence	54790/459752

Station	Type of survey	Overall finds density	Ceramic finds				Topography	Grid reference (ED1950)
			Imp.	MIA	LIA	Loom-weights		
A34	interior	A	S	S	A	3	slope	54791/459745
A35	interior	S	S		S		slope of eminence	54758/459664
A36	interior	A			M	1	eminence	54787/459645
A37	interior	M	S	S	S		slope	54762/459580
A38	interior	S	S		S	1	level ground	54673/459666
A39	interior	A	M		A	1	low undulation	54709/459728
A40	interior	M	S	S	S	1	slope	54755/459714
A41	interior	S	S	S	S		level ground	54726/459550
A42 (M25)	Mass survey	N					level ground	54504/459863
A43	interior	S			S		level ground	54718/459544
A44	interior	A		S	M	1	level ground	54683/459569
A45	interior	M	S	S	S	1	level ground	54665/459647
A46	interior	M			M	1	level ground	54630/459563
A47	interior	M	S	S	S		level ground	54603/459569
A48	interior	S	S		S		slope of river terrace	54613/459715
A49	interior	M	S		M		level ground	54658/459531
A50	interior	A	S		M	5	top end of valley	54637/459680
A51	interior	A		S	S	1	low undulation	54677/459606
A52	interior	M	S		M	1	eminence	54715/459757
A53	interior	S	S	S	S		low undulation	54847/459907
A54	interior	A	S		A		level ground	54910/459842
A55	interior	A	S	S	A	4	slope	54764/459821
A56	interior	S	S	S	S	2	low undulation	54786/459836
A57	interior	M	S	S	M		level ground	54854/459708
A58	interior	A	A	S	A		level ground	54789/459686
A59	interior	A	S		S		slope	54740/459690
A60	interior	A	S	S	A	1	level ground	54668/459658
A61	interior	A	S		A		level ground	54692/459652
A62	interior	M	S	S	M		level ground	54828/459618
A63	interior	M	S	S	S		slope	54794/459595
A64	interior	M	S	S	M	1	level ground	54740/459585
A65	interior	M	M	S	M		slope	54728/459525
A66	interior	M	S	S	M		slope	54564/459583
A67	interior	M	M	S	A	1	slope	54748/459751
A68	interior	M	N/A	S	M	4	slope	54852/459934
A69 (J181)	Mass survey	S			S		level ground	55073/459760

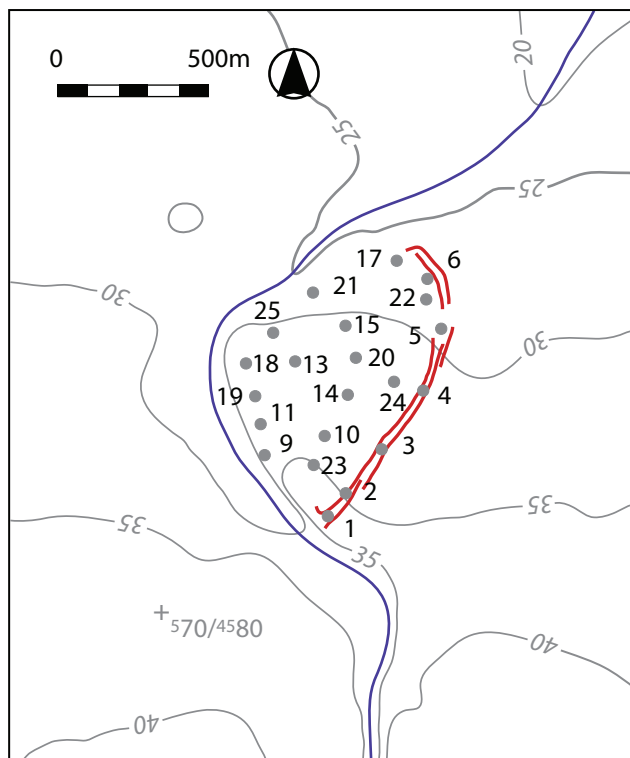
Key: S = rare to sparse pot (usually less than 10 sherds, “a sherd or two”); M = moderate pot (c.10–20 sherds, “well represented”, “a fair amount”); A = abundant pot (>20 sherds, comments like “really abundant”); N = none

Key: small dot = survey station; medium dot = large gridded survey; M = the Medusa tomb; CV = location of circular view shown shown in Appx 2.

Masseria Finizio

Station	Type of survey	Overall finds density	Ceramic finds				Topography	Grid reference (ED1950)
			Imp.	MIA	LIA	Loom-weights		
F1	boundary	M					top of terrace	57055/458034
F2	boundary	S					slight slope	57063/458040
F3	boundary	S					slight slope	57073/458054
F4	boundary	S	S		S		level ground	57087/458073
F5	boundary	S	S				level ground	57092/458094
F6	boundary	M	S	S	S		level ground	57088/458110
F7–8	not used							
F9	interior	M		S	M		slope of river terrace	57034/458052
F10	interior	S		S			slight slope	57054/458058
F11	interior	S		S	S		sloping ground at edge of river terrace	57033/458061
F12	not used							
F13	interior	M	S	S	S		level ground	57044/458083
F14	interior	S	S	S	S		slope	57061/458072
F15	interior	S		S	S		slight slope	57060/588093
F16	not used							
F17	interior	N					slope of river terrace	57078/458116
F18	interior	A		S	M		spur	57028/458082
F19	interior	N					edge of river terrace	57064/458084
F20	interior	S					slight slope	57064/458084
F21	interior	S	S				top of slope	57049/458105
F22	interior	S					level ground	57086/458104
F23	interior	S			S		slope	57050/458048
F24	interior	A		S	S		slight slope	57076/458076
F25	interior	S	S				slope of valley	57037/458092

Key: S = rare to sparse pot (usually less than 10 sherds, “a sherd or two”); M = moderate pot (c.10–20 sherds, “well represented”, “a fair amount”); A = abundant pot (>20 sherds, comments like “really abundant”); N = none



Key: small dot = survey station

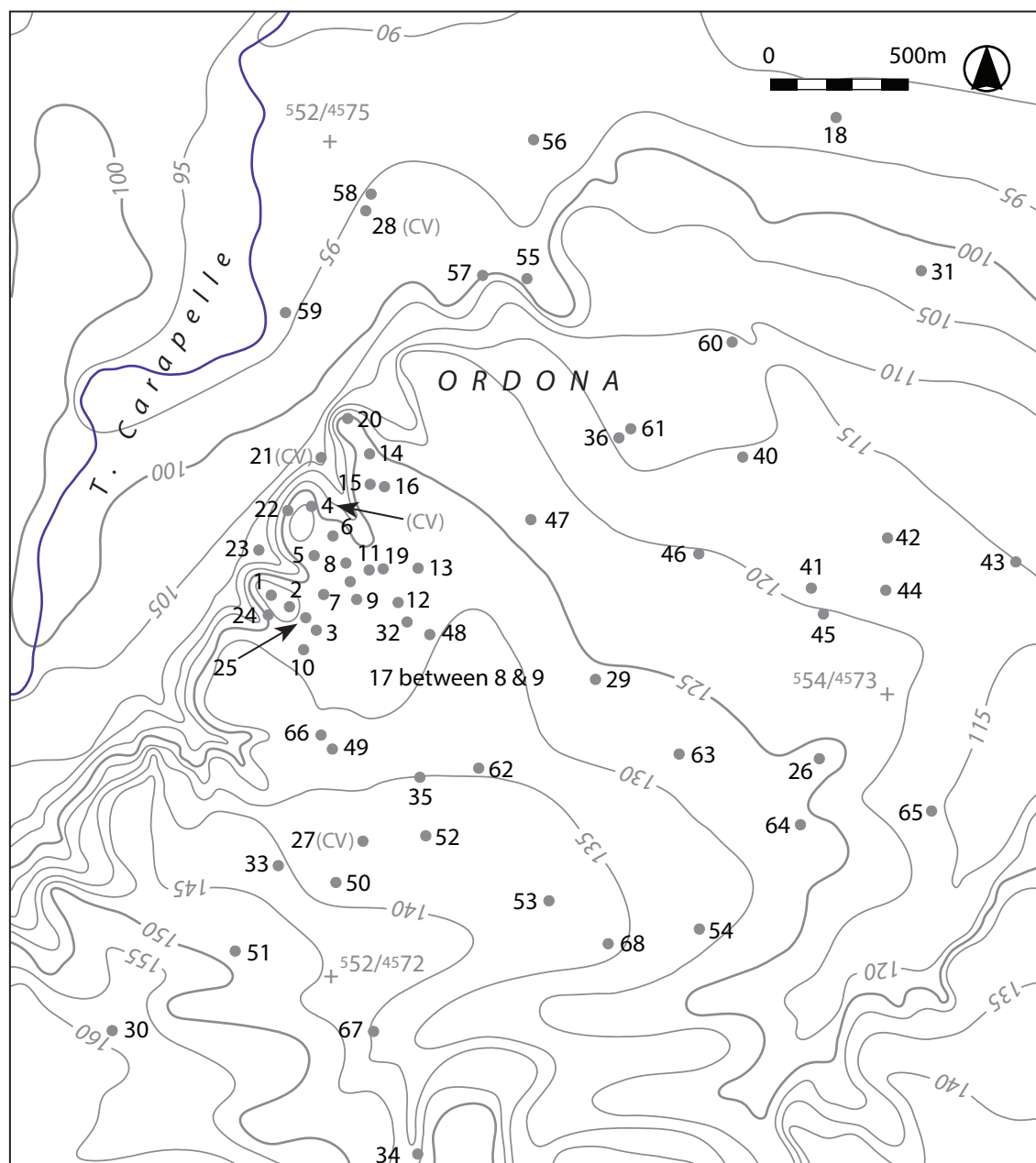
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Station	Type of survey	Overall finds density	Ceramic finds				Topography	Grid reference (ED1950)
			Imp.	MIA	LIA	Loom-weights		
O1	interior	M	M		M		top of ridge	55178/457336
O2	interior	M	S		M		ridge	55185/457331
O3	interior	M	M		M		slope	55194/457324
O4	interior	M	S		S		valley slope	55193/457368
O5	interior	M		S	S		valley slope	55193/457351
O6	interior	A			S		valley slope	55201/457357
O7	interior	S	S		S		valley slope	55196/457337
O8	interior	M	S		S		saddle	55206/457348
O9	interior	M	S		M		slope	55209/457335
O10	interior	S	S		S		head of valley	55189/457317
O11	interior	M	S		M		ridge	55214/457346
O12	interior	M	M		S		level ground	55224/457334
O13	interior	S	S		S		level ground	55232/457346
O14	interior	M	S		S	1	hill top	55215/457387
O15	interior	M	S		S		slope	55214/457376
O16	interior	S	S		S	1	top of ridge	55219/457375
O17	opportunistic	M	N/A	N/A	N/A	3	N/A	55208/457342
O18	interior	S			S		slope	55384/457507
O19	interior	M	S		S	1	slope	552182/457346
O20	interior	M			S		edge of river terrace	55206/457401

Station	Type of survey	Overall finds density	Ceramic finds				Topography	Grid reference (ED1950)
			Imp.	MIA	LIA	Loom-weights		
O21	interior	S					valley	55198/457384
O22	interior	S	S		S		edge of river terrace	55190/457385
O23	interior	S	S	S	S		valley	55176/457337
O24	interior	M		S	M		end of ridge	55177/457334
O25	interior	M	S		S		end of ridge	55187/457324
O26	interior	S					discrete knoll	55376/457176
O27	interior	A	N/A	M	N/A		top of hill	55212/457248
O28	interior	S		S	S		level ground (alluvium)	55216/457478
O29	interior	M	S		M		low undulation	55295/457303
O30	interior	S					level ground	55122/457182
O31	interior	N					slope	55415/457451
O32	interior	A	M	S	M	1	slope	55228/457326
O33	interior	A	M	M	A	5	slope	55182/457240
O34	interior	S					low undulation	55233/457134
O35	interior	M	M	S	M		slope	55231/457271
O36	interior	M	M	M	M		slope	55304/453799
O37–9	not used							
O40	interior	A	A	S	M	1	valley	55348/457385
O41	interior	M	S				valley	55373/457338
O42	interior	S	S		S		level ground	55400/457356
O43	interior	S					slope of eminence	55446/457348
O44	interior	S	S		S		slope	55399/457338
O45	interior	S	S				slope	55377/453729
O46	interior	A	M	S	M		slope	55332/457351
O47	interior	A	M	M	A		slope	55273/457363
O48	interior	A	A	S	S		slope	55236/457323
O49	interior	M	S	M	S	1	slope	55200/457282
O50	interior	A	M	S	M	3	slope	55202/457233
O51	interior	S	S		S		slope of eminence	55164/457209
O52	interior	M	S	S	M	1	slope	55234/457249
O53	interior	A	S	S	M	3	slope	55278/457227
O54	interior	S	S	S	S		top of slope	55332/457215
O55	interior	A	S	S	S		slope	55271/457451
O56	interior	S			S		base of slope	55275/457500
O57	interior	A	S	S	M		slope of discrete hill	55254/457452
O58	interior	M	S		S		level ground	55214/457481
O59	interior	M	S		S		slope	55183/457439
O60	interior	A	S	S	M		slope	55345/457427
O61	interior	A	S	S	S		slope	55308/457396
O62	interior	A	A	A	M	1	slope	55253/457273

Station	Type of survey	Overall finds density	Ceramic finds				Topography	Grid reference (ED1950)
			Imp.	MIA	LIA	Loom-weights		
O63	interior	M	M	S	S		eminence	55325/457279
O64	interior	S	S	S			valley slope	55369/457253
O65	interior	S			S		valley slope	55416/457258
O66	interior	M	S	S	S		slope	55196/457286
O67	interior	S	S				valley slope	55215/457180
O68	interior	M	S		S		slope	55299/457210

Key: S = rare to sparse pot (usually less than 10 sherds, “a sherd or two”); M = moderate pot (c.10–20 sherds, “well represented”, “a fair amount”); A = abundant pot (>20 sherds, comments like “really abundant”); N = none

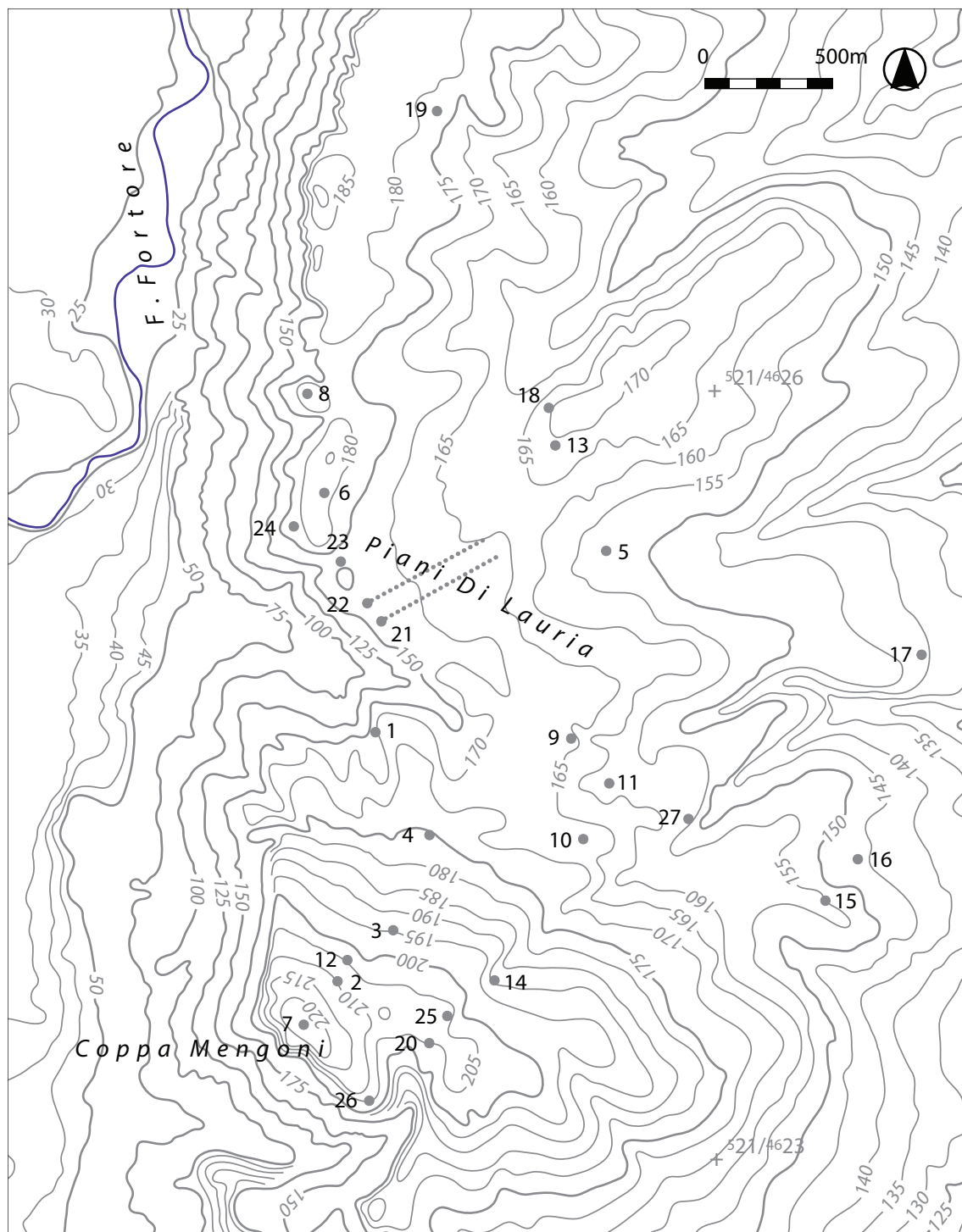


Key: small dot = survey station; CV = location of circular view shown shown in Appx 2.

Tiati

Station	Type of survey	Overall finds density	Ceramic finds				Topography	Grid reference (ED1950)
			Imp.	MIA	LIA	Loom-weights		
T1	interior	A	A				spur	51967/462467
T2	interior	A	S	M	A	8	slope	51952/462370
T3	interior	A	S	S	A		slope	51974/462390
T4	interior	M			S	1	slope	51987/462427
T5	interior	A	A		S		hollow	52057/462527
T6	interior	S	S				slope	51947/462560
T7	interior	S			S		top of hill/ edge of escarpment	51938/462352
T8	interior	S					spur	51940/462600
T9	interior	A	S	S	A	2	slope	52044/462464
T10	interior	A	S	S	S	1	eminence	52047/462425
T11	interior	M			S		hollow	52058/462447
T12	interior	A		S	S		top of ridge	51954/462378
T13	interior	A	S				top of ridge	52038/462580
T14	interior	S			S		valley slope	52013/462368
T15	interior	A			A		undulating ground	52143/462403
T16	interior	N					slope	52156/462417
T17	interior	N					sloping ridge	52179/462496
T18	interior	A	S	M	M		slope	52036/462593
T19	interior	N					concave slope	51990/462709
T20	opportu-nistic	A	undifferentiated IA			3	sloping ridge	51987/462435
T21	boundary transect 2	A	A	S	S	1	edge of escarpment	51970/462507
T22	boundary transect 3	A	M	M	M		edge of escarpment	51964/462517
T23	boundary	S	S				edge of escarpment	51953/462534
T24	boundary	M	M				edge of escarpment	51944/462539
T25	boundary	A					ridge	51996/462355
T26	boundary	S	S	S	S	2	edge of escarpment	51964/462322
T27	boundary	A	S	M	M	>1	head of valley	52090/462432
T28	transect 2	A	M	M	S		gentle slope	51969/462510–52014/462535
T29		A	A	S	S	1	gentle slope	
T30	transect 3	M	M	S	S			51964/462517–52009/462542
T31		A	A	M	S		gentle slope	

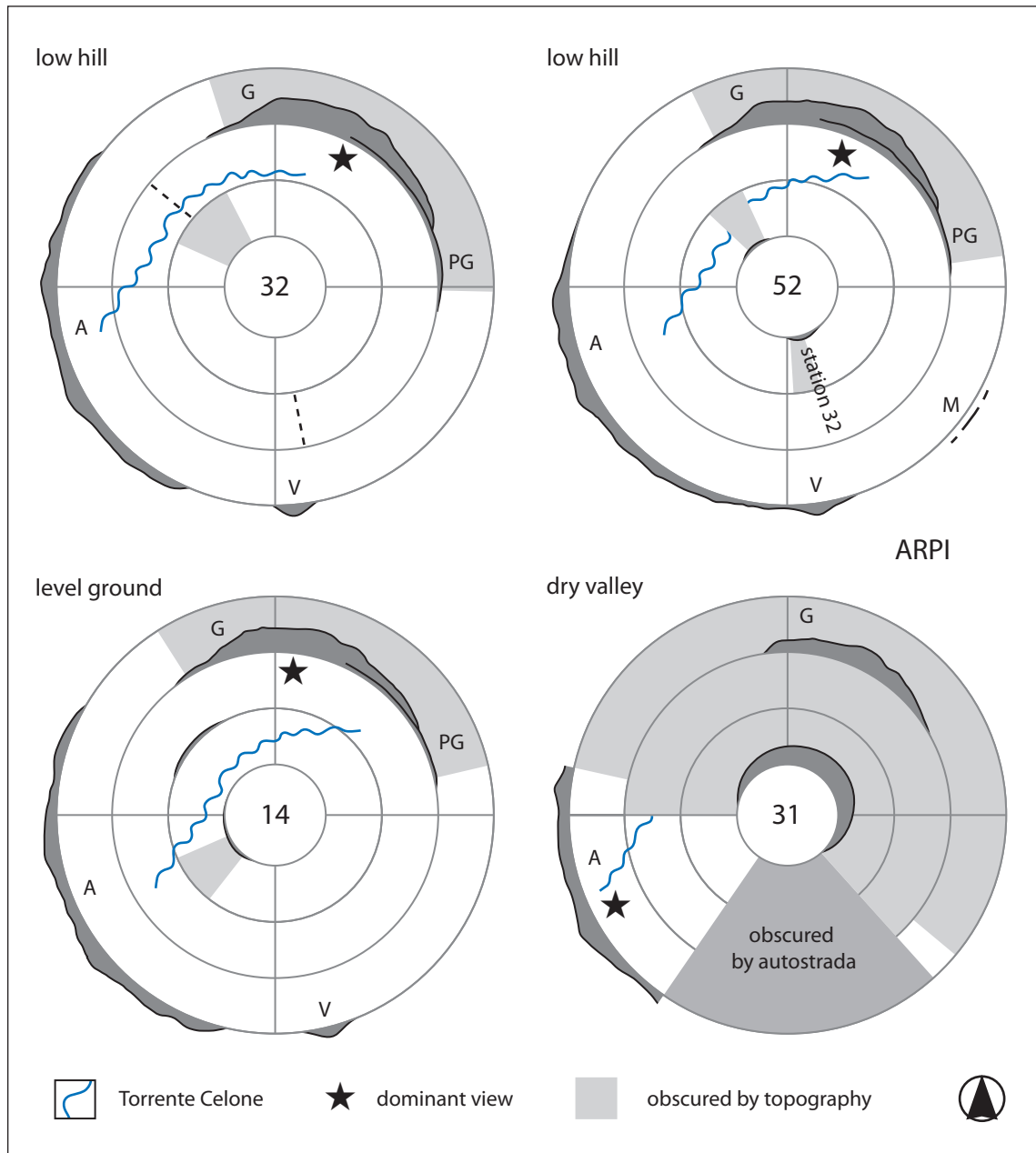
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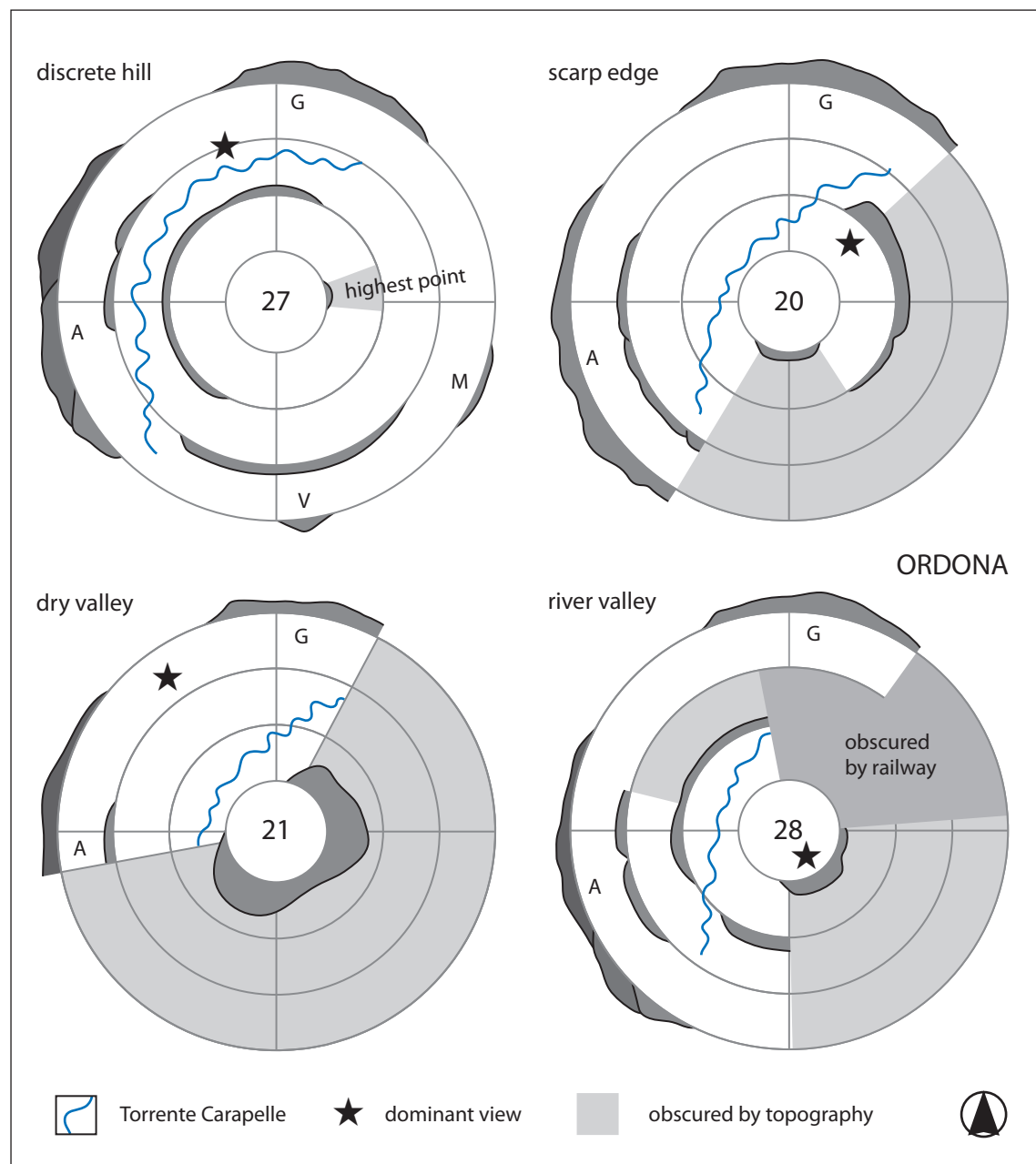
Key: small dot = survey station.

Appendix 2: Circular views

Arpi



Ordona



Appendix 3: Other finds

Arpi



Figure A3.1

Wheel-made painted pedestal dish in the section of the pipe trench cut through Survey Station A14. Scale 2€



Figure A3.2

Fragment of Daunian stele from Survey Station A63. Scale 2€

Ordona

Figure A.3

Rim in the Ascoli-Vegetal style of
matt-painted Geometric pottery.
Scale 5cm



Figure 17

A brooch-impressed loom-weight. Ordona
Survey Station O37. Scale 5cm

Figure A3.2

Spindle whorl. Scale 5cm



Appendix 4: Mertens' *Ordonia* distribution

